

CLAIMS:

What is claimed is:

- 1 1. A method of indicating a status affected by the performance of an ALU
2 mathematical operation, comprising:

3 executing an ALU mathematical operation instruction on a set of source operands;

4 determining that the ALU mathematical operation instruction corresponds to an ALU

5 mathematical operation instruction with carry;

6 producing a result based on the set of source operands in accordance with the ALU

7 mathematical operation instruction; and

8 setting a status flag based on the result.

- 1 2. The method according to claim 1, wherein the step of setting the status flag
2 includes the step of determining that the result is a non-zero value.

- 1 3. The method according to claim 2, wherein the step of setting the status flag
2 includes the step of clearing the status flag by writing a value of zero to the status flag.

- 1 4. The method according to claim 3, wherein the step of setting the status flag
2 includes the step 'maintaining the value of zero in the status flag' until an ALU
3 mathematical operation instruction without carry is determined. " 5 4/01

1 5. The method according to claim 1, wherein the step of setting the status flag
2 includes the step of determining that the result is a zero value.

(5) "0" \Rightarrow mis-division
ue. \Rightarrow mixture

1 6. The method according to claim 5, wherein the step of setting the status flag
2 includes the step of maintaining the value in the status flag.

Nothing does
not include
nothing

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1 7. A processor for indicating a status affected by the performance of an ALU
2 mathematical operation, comprising:

3 an ALU operable to:

4 execute an ALU mathematical operation instruction on a set of source operands;

5 | determine that the ALU mathematical operation instruction corresponds to an ALU
6 | mathematical operation instruction with carry;) *instruction does*

1) instruction decoder

7 produce a result based on the set of source operands in accordance with the ALU

8 mathematical operation instruction; and

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9      set a status flag based on the result.

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1 8. The processor according to claim 7, further comprising the ALU operable to
2 determine that the result is a non-zero value.

9. The processor according to claim 8, further comprising the ALU operable to clear
1 the status flag by writing a value of zero to the status flag.

3 10. The processor according to claim 9, further comprising the ALU operable to
4 maintain the value of zero in the status flag until an ALU mathematical operation
5 instruction without carry is determined. "

*similar to
claim 4*

1 11. The processor according to claim 7, further comprising the ALU operable to
2 determine that the result is a zero value.

1 12. The processor according to claim 11, further comprising the ALU operable to
2 maintain the value of the status flag.

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